

## Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Hsieh MM, Kang EM, Fitzhugh CD, et al. Allogeneic hematopoietic stem-cell transplantation for sickle cell disease. N Engl J Med 2009;361:2309-17.

Supplemental Table 1. Pulmonary testing pre- and post-HSCT.

Patient	Pre-HSCT TRV (meters/sec)	Pre-HSCT 6 minute walk (meters)	Post-HSCT TRV (most recent)	Post-HSCT 6 minute walk (most recent)	
1	3.0	353	2.8	445	
2	<2.0	Not done	2.2	540	
3	<2.0	Not done	<2.0	378	
4	2.4	Not done	<2.0	560	
5	2.6	Not done	<2.0	614	
6	<2.0	Not done	<2.0	518	
7	3.4	Not done	2.6	497	
8	2.6	Not done	2.5	441	
9	2.7	Not done	2.8	315	
10	2.6	Not done	2.5	615	
average				492 ± 31.1	

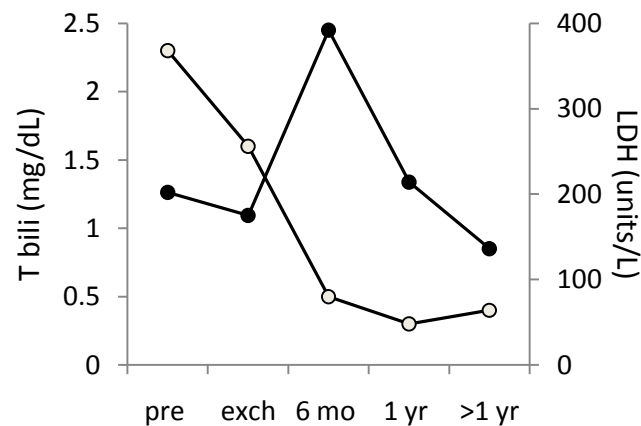
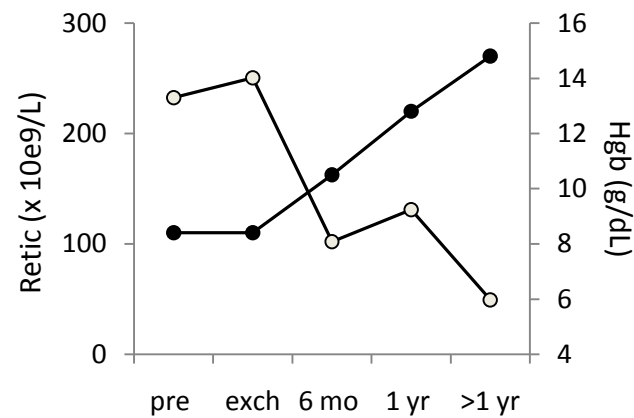
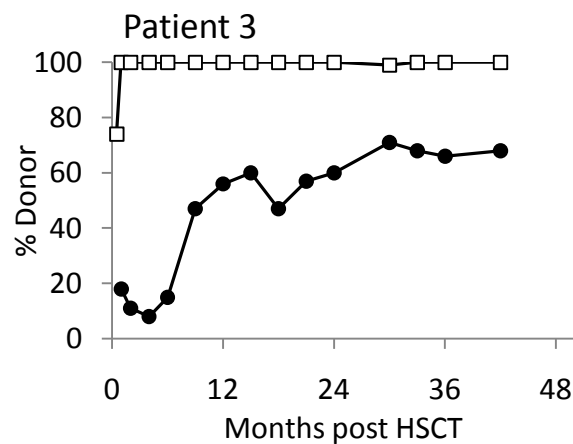
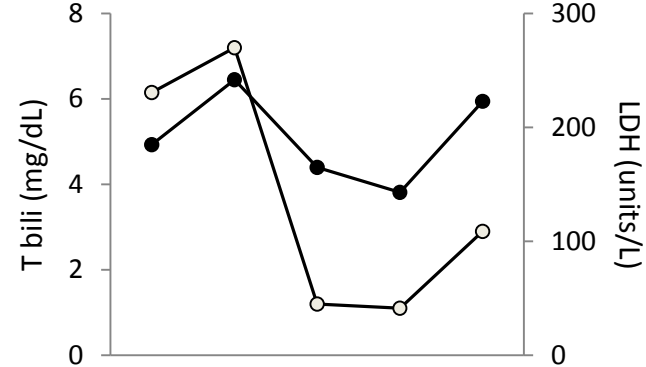
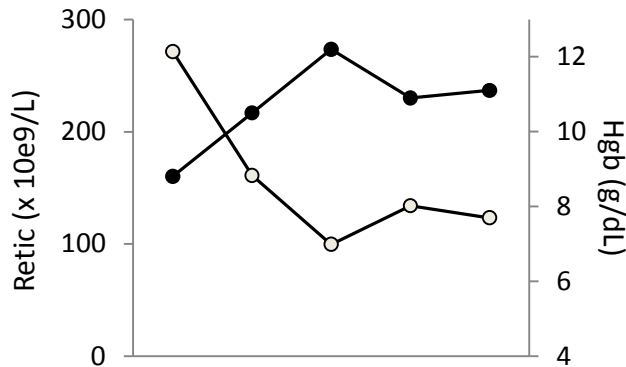
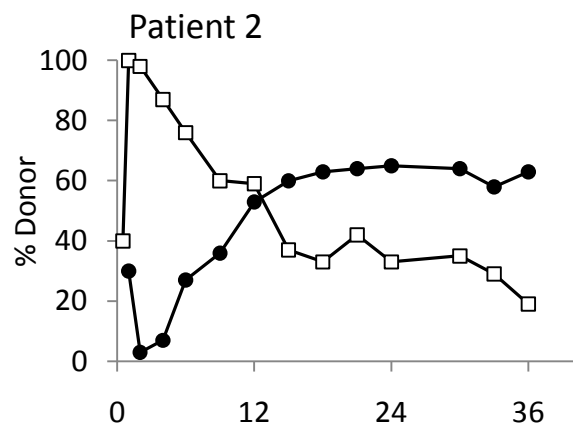
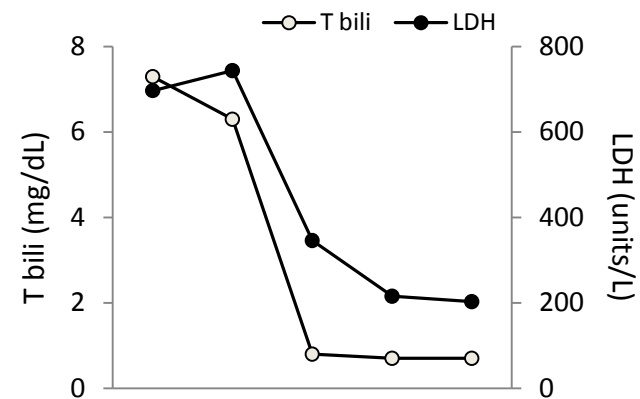
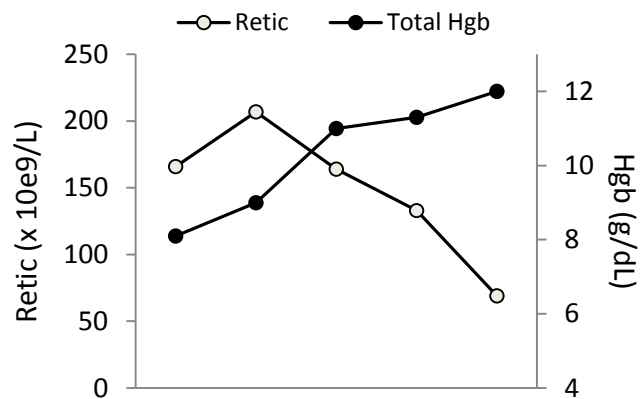
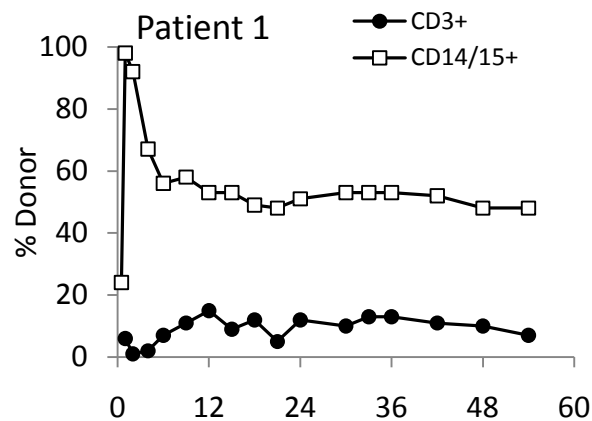
TRV, tricuspid regurgitant jet velocity; HSCT, hematopoietic stem cell transplant. Historic controls for our institution are as follows: sickle cell patients without pulmonary hypertension, 435 ± 31; sickle cell patients with pulmonary hypertension, 320 ± 20 meters (Anthi et al, Am J Respir Crit Care Med. 2007 June 15).

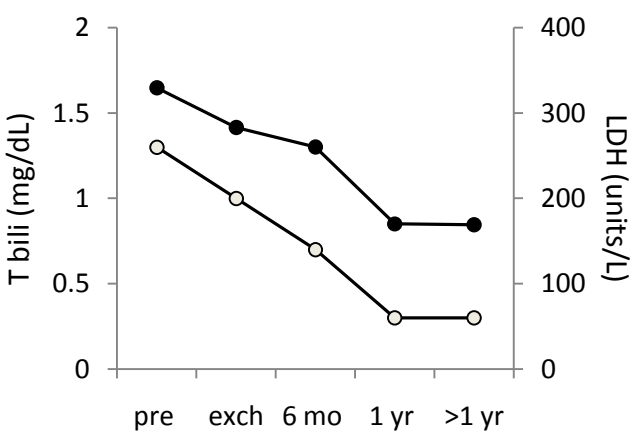
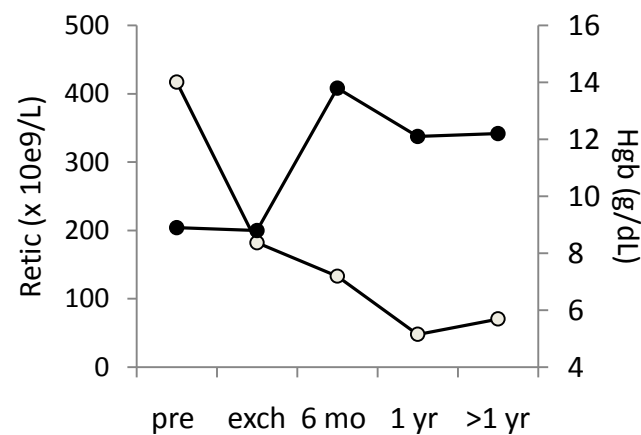
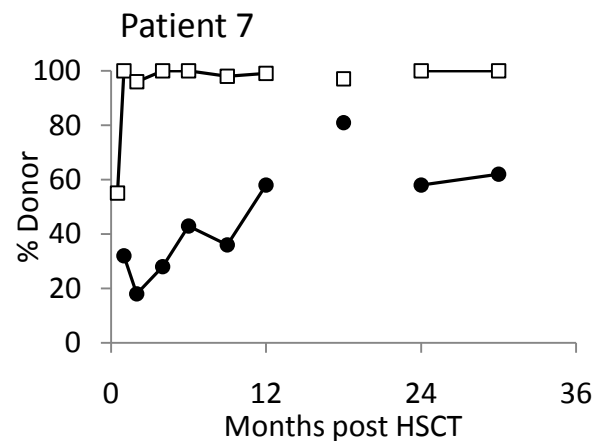
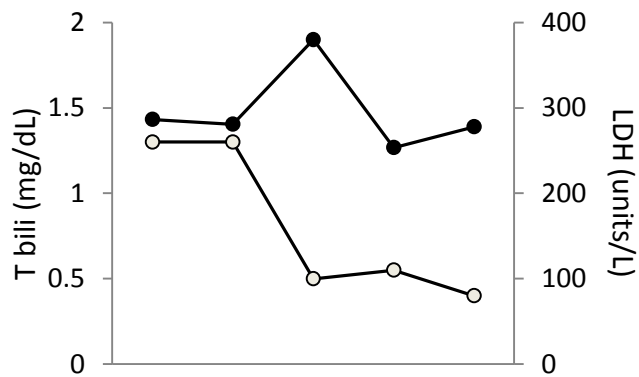
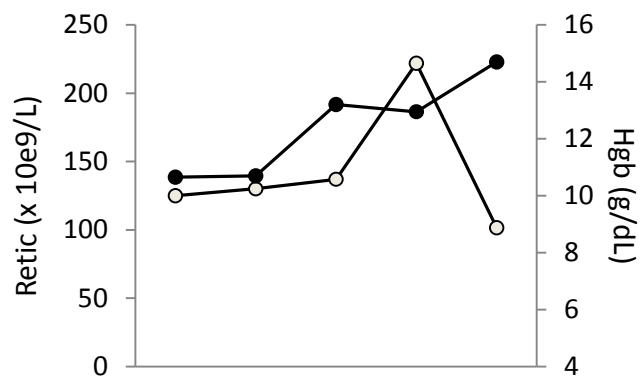
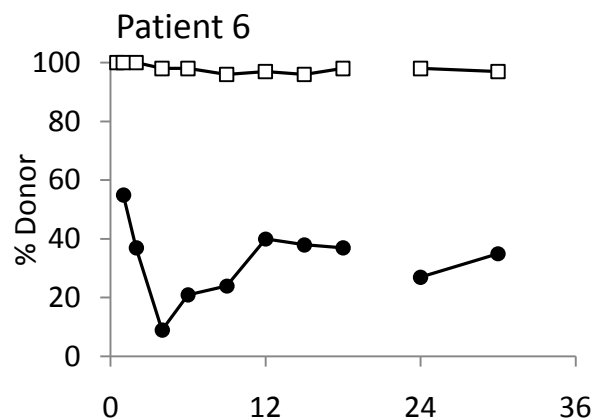
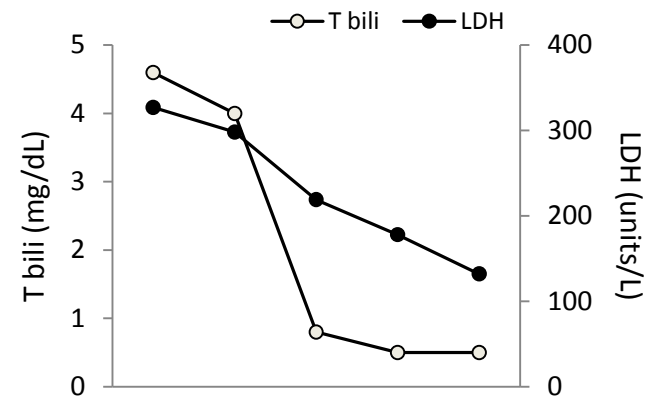
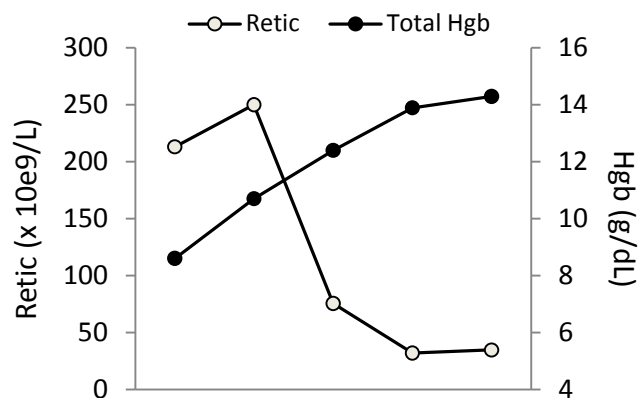
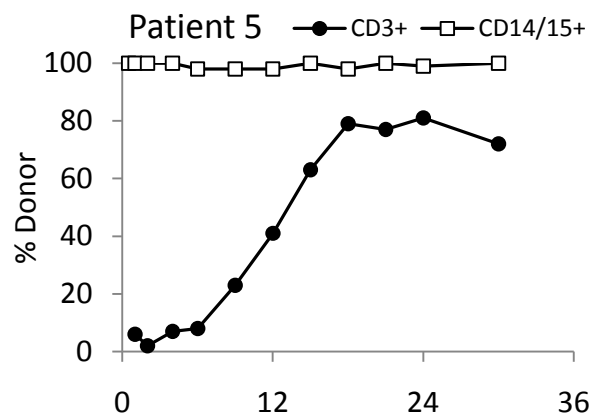
Supplemental Table 2. Laboratory parameters related to fertility. Latest values are shown. Sperm analysis was not performed in male patients.

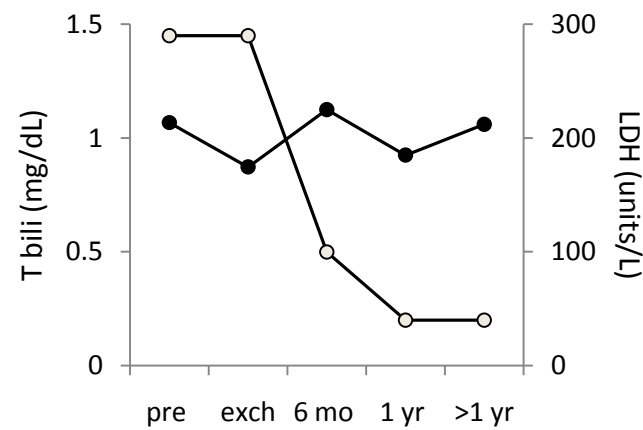
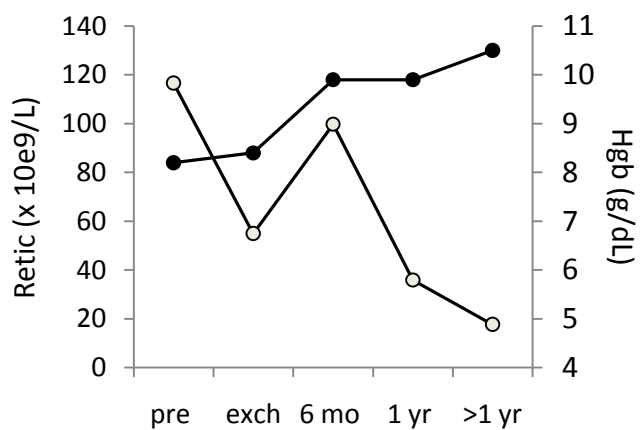
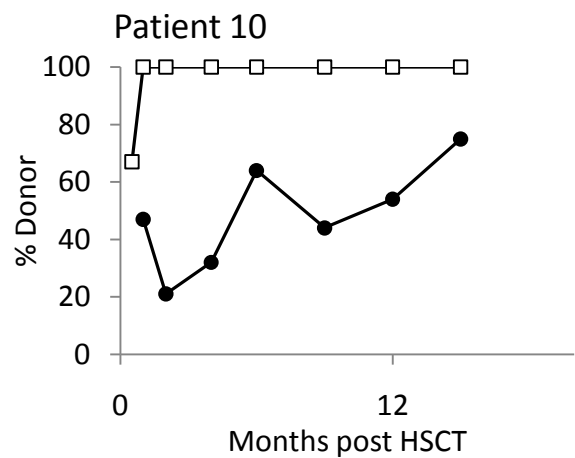
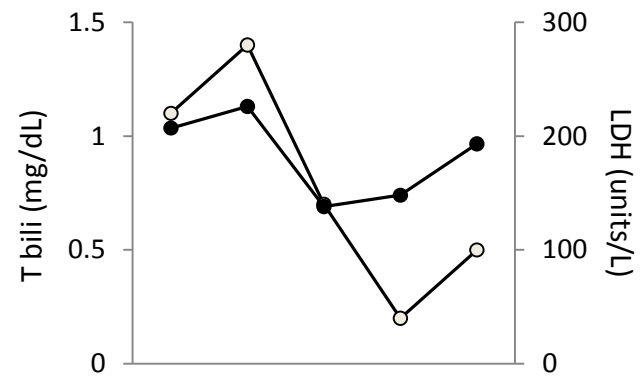
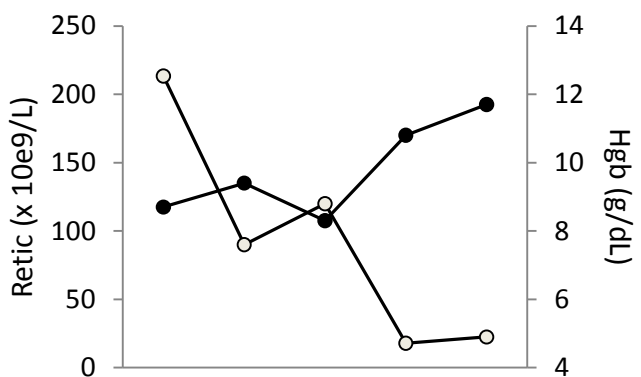
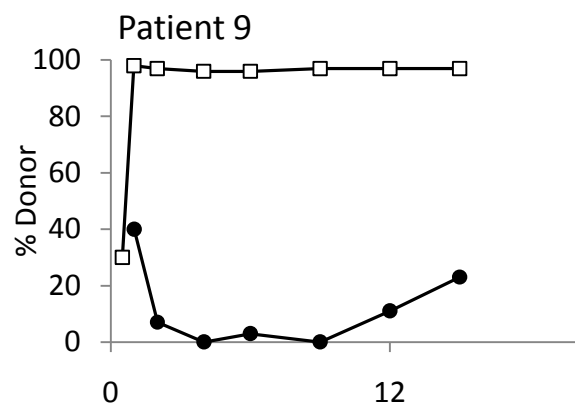
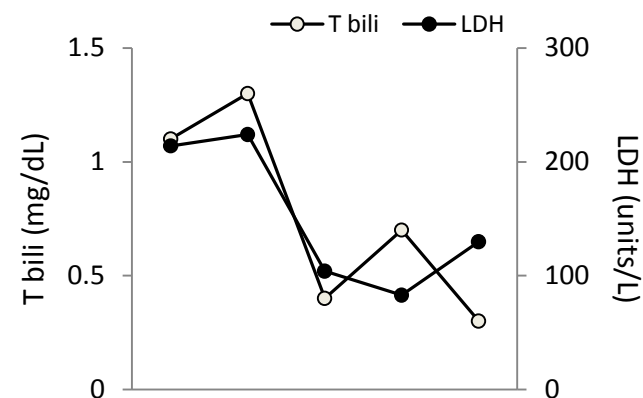
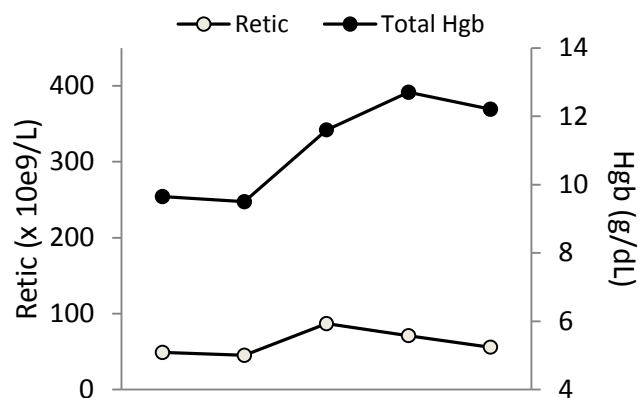
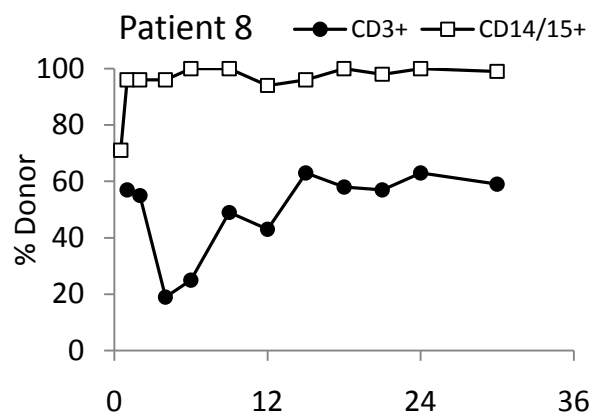
Female patients	Age at HSCT	Years post-HSCT	FSH (units/L) Follicular 3-11 Mid-cycle 6-21 Luteal: 1-9 Post-menopausal 25-153 Adult males 1-11	LH (units/L) Follicular 1-12 Mid-cycle 17-77 Luteal: 0-15 Post-menopausal 11-40 Adult males 1-8	Comments
1	24	4.5	5.8	2	Irregular menses prior to HSCT; currently on oral contraceptives, and continues to have irregular menses
3	21	3.5	6.6	2.7	Received 200 cGy. Delivered a healthy baby girl 3 years post-HSCT.
7	26	2.5	6.9	5	Regular menses on oral contraceptives
8	26	2.5	51.5	20.8	0.5 year after HSCT: FSH 56, LH 57 1 year after HSCT: FSH 7, LH 20 2 years after HSCT: FSH 11.6, LH 3.2
9	45	1.25	179	98.4	Stopped menstruation about 0.5 year months after HSCT
Male patients			Total testosterone (ng/dL)	Free testosterone (ng/dL)	
2	27	3	1230	40.7	Received 200 cGy in first HSCT and 400 cGy in second HSCT.
4	16	2.5	616	19.6	Received 300 cGy in first HSCT and 400 cGy in second HSCT.
5	21	2.5	191	4.1	
6	40	2.5	338	9.9	On testosterone replacement. One testis was removed at age 5; the other testis is atrophic.
10	26	1.25	767	18.1	

HSCT, hematopoietic stem cell transplant; FSH, follicle stimulating hormone; LH, lutenizing hormone

Supplemental Figure 1. Detailed transplant outcome of engrafted patients. Each row of 3 panels represent results of HSCT per patient peri-transplant including 1 month before HSCT (pre), after red cell exchange (exch), 6 month post-HSCT (6 mo), 1 year post-HSCT (1 yr), and up to the most recent follow-up (> 1 yr). T cell (CD3+) and myeloid (CD14/15+) chimerism are plotted with respect to months after HSCT on the left panels; reticulocytes count (retic) and total hemoglobin (total hgb) are plotted in the middle panels; total bilirubin (t bili) and lactate dehydrogenase (LDH) are plotted on the right panels.







Supplemental Figure 2. Narcotic requirement post-HSCT. The average IV morphine equivalent dose per week for 4 patients was plotted over time with standard errors of the mean. Weaning of narcotics occurred between 3 and 6 months.



